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ABSTRACT

In its fall 2002 session, the Academic Senate for California Community Colleges passed a resolution seeking support for policies that will improve instruction and student support services for underprepared students. This document aims to provide a basis for improving basic skills instruction and services by providing a survey of the current literature that discusses the most effective practices in basic skills found throughout the nation and practices in the California community colleges that model these effective practices. The literature discussed herein is organized according to Boylan (2002) into these four categories: (1) Programs Structures; (2) Instructional Interventions and Academic Support Services; (3) Faculty and Staff Development; and (4) Program Evaluation. The document lists the recommendations made by the Academic Senate, including the following: (1) local senates should lead their faculty and administration to view basic skills instruction as central to the community college mission; (2) they should study the basic skills programs in their colleges and support basic skills instructors and program leaders; and (3) they should lead the college to take a more global approach to the instruction of basic skills students so that faculty from all areas participate in an across-the-curriculum approach to basic skills learners. Research instrument attached. (Contains 33 references.) (NB)

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A SURVEY OF EFFECTIVE PRACTICES IN BASIC SKILLS

THE ACADEMIC SENATE FOR CALIFORNIA COMMUNITY COLLEGES

JC030413

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This document was prepared by a workgroup comprised of representatives from the Academic Senate for California Community Colleges and the Chancellor's Advisory Committee, with assistance from a Fund for Instructional Improvement (FII) grant awarded by the Board of Governors.

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ABSTRACT

Most first-time community college students are not prepared to succeed in college-level courses without one or more courses in basic skills to develop necessary reading, writing, and mathematics skills. The mission to provide basic skills is directed at a vast number of students who enter our community colleges today. To serve these students as well as we can, we must encourage faculty, administrators, and others in decision-making positions to employ effective practices so that under-prepared students may complete transfer and occupational programs within a reasonable timeframe.

This paper is intended to provide a basis for improving basic skills instruction and services by providing readers with a survey of current literature discussing the most effective practices in basic skills found throughout the nation and practices in the California community colleges that model these effective practices.

Literature in developmental education clearly identifies practices that data show to be effective. These have been organized according to categories based on the work by Hunter Boylan in his report entitled *What Works: Research Based Best Practices in Developmental Education* (2002). There are four large categories of practices:

1. Program Structures,
2. Instructional Interventions and Academic Support Services,
3. Faculty and Staff Development, and
4. Program Evaluation.

This paper briefly explains and illustrates these in general terms.

Most of the practices that the survey of current literature points out as effective practices were identified by California community college faculty in 2001 survey of practices in basic skills. The survey requested contact names and addresses for follow-up interviews so that the Basic Skills Grant Workgroup could collect more information. Members of the Workgroup conducted many follow-up interviews with respondents from these colleges who provided descriptions of effective practices that appear in this paper. Only those practices that were supported by evidence of success were included. (Respondents reported evidence; however, verification was beyond the resources of the Workgroup.)

The Workgroup could not find examples of some of the practices identified in the survey of current literature, most notably assessment and placement practices.

The paper also includes a section of resources useful to those developing basic skills programs or enhancing existing ones.

INTRODUCTION

No part of the mission of the California community colleges is more important than that of providing instruction and support services to students who are not yet prepared to succeed in college-level coursework. Success in this part of our mission increases the number of people to whom the other parts of our mission address.

The number of students who come to our community colleges under-prepared for the rigors of college study is staggeringly high. According to the results of a 2001 survey of basic skills practices in California community colleges conducted by the Academic Senate for California Community Colleges, most colleges that responded reported that far more than half of their entering students who were assessed in fall 2000 placed at a level below college readiness. However, these survey results also reveal that only about one-third of students entering in fall 2000 enrolled in basic skills courses during that term, and State Chancellor's Office data confirm this proportion, indicating that of the students who began in the fall of 1995, less than 34% enrolled in a basic skills course during the next six years, although more than half required instruction at that level. So many of these under-prepared students do not get the instruction they need.

Clearly, students coming to the California community colleges need the best basic skills instruction and support to have a realistic chance of succeeding in academic and vocational programs and transferring to four-year institutions or moving into positions in the workforce. In other words, the success of these students is fundamental for the California Community College System to fulfill other parts of its mission, providing transfer-level and occupational education.

For this reason the Academic Senate for California Community Colleges, at its 2002 fall session, passed the following resolution seeking the necessary support of the California Community College system:

> **9.03 F02 BOG to Develop Policy to Strengthen Basic Skills Instruction and Student Support Services**
> Resolved, That the Academic Senate for California Community Colleges recommend that the Board of Governors support new policies that will improve instruction and student support services for underprepared students; and
>
> Resolved, That the Academic Senate for California Community Colleges urge the Board of Governors to establish a task force under the leadership of the Academic Senate, including membership from the Academic Senate and the Chancellor's Office Basic Skills Advisory Committee, to suggest policy to help strengthen basic skills programs in the California community colleges. Topics may include:
>
> - A reexamination of the funding formula for noncredit instruction and student services;
> - A requirement that matriculation services be provided to students in noncredit programs;
> - A requirement for the funding of staff development opportunities for those who teach basic skills courses; and
> - Provision for statewide technical assistance for colleges that want to improve their basic skills programs.

At the college level there is much we can do to assure that we are working to provide the best instruction and support services to the vast numbers of under-prepared students who come to us. We need to continuously assess the effectiveness of our instructional and student support services, bolster our efforts where necessary, and increase our capacity as efficiently as possible. To provide for increased effectiveness, it is essential that we identify the most effective practices in basic skills instruction and provide examples of those practices within our system so they may serve as models for other colleges.

This paper, written with the support of a grant from the state Fund for Instructional Improvement (FII), will provide a survey of literature about the most effective practices in basic skills (often referred to as *developmental*) education throughout the nation. It also provides examples of these effective practices in California community colleges. Finally, it includes a section on resources available to those who want more in-depth study on particular practices.

The effective practices described in this paper are organized according to categories based on work by Hunter Boylan in his report for the Continuous Quality Improvement Network entitled *What Works: Research Based Best Practices in Developmental Education* (2002). There are four large categories:

I. Program Structures:
   a. Centralized vs. Decentralized
   b. Learning Communities
   c. Integrated Reading and Writing Programs

II. Instructional Interventions and Academic Support Services
   a. Assessment and Placement
   b. Tutoring
   c. Supplemental Instruction
   d. Classroom Assessment Techniques
   e. Learning Laboratories
   f. Technology
   g. Counseling/Academic Advising

III. Faculty and Staff Development

IV. Program Evaluation

PROGRAM STRUCTURES

Centralized vs. Decentralized

Organizational strategies for developmental education can make a difference in student success. Centralized programs, those characterized by developmental education[1] departments, seem to correlate with greater student success than decentralized programs, those in which developmental instruction and support services are the responsibility of separate disciplines or offices (Boylan, Bliss, & Bonham, 1997). But Boylan stresses that it is the high degree of coordination and communication typically found in centralized programs that is the key factor. He suggests that decentralized programs, which are most common in community colleges, can be equally successful if the program structure requires high levels of communication and coordination. This might be accomplished by regular meetings of all faculty and staff involved in basic skills programs, including lead faculty in disciplines such as English and math along with counselors, tutoring personnel, reading and writing center staff, and administrators with responsibilities for basic skills. Many community colleges do have basic skills committees or advisory committees. Membership on these committees should be wide-ranging, and the charge of the committee should include a mission statement, goals and objectives for basic skills, and clearly defined evaluation processes and criteria to measure program and student success.

In "The Organization of Developmental Education: In or Out of Academic Departments?" Delores Perin of Teachers' College, Columbia University (2002) offers a detailed critique of the advantages and disadvantages of mainstreamed vs. centralized developmental education program structures. She notes that mainstreamed programs (programs in which remedial or developmental courses are offered within academic departments) are more likely to have better alignment between remedial and college level course content and greater dialogue and communication between instructors who teach remedial and college level courses than centralized programs. They also tend to have less of a stigma in the eyes of students who may consider centralized programs as isolated and inferior in terms of social status.

However, centralized programs may be superior in terms of teacher motivation and experience because these instructors have chosen to devote their careers to developmental education. Also centralized programs may be more likely than mainstream programs to offer high quality support services such as tutoring and academic advising. Perin concludes her critique with a number of recommendations for incorporating the "best of both worlds," whichever model a college adopts. She suggests that centralized programs may be most beneficial to students with the lowest level of skills, especially those with reading difficulties. On the other hand, students with higher-level skills, with perhaps only one area of academic difficulty, may thrive in mainstreamed programs where they get the help they need but still feel a part of the mainstream life of the college.

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[1] The terms *developmental* and *basic skills* are interchangeable.

Learning Communities

The way curriculum is designed and delivered is also important. Research overwhelmingly supports the use of learning communities (Levine, 1999). With roots in a model created by Joseph Tussman at U.C. Berkeley in the 1960's, contemporary learning communities are flourishing in higher education. While there are a number of different models, learning communities share some critical defining features: a cohort of students, two or more linked courses, and a focus on active learning and collaboration (Levine, 1999).

Barbara Leigh Smith, academic dean at Evergreen State College and director of the Washington Center for Improving the Quality of Undergraduate Education, points out in "Taking Structure Seriously: The Learning Community Model" that "restructuring efforts around learning communities are guided by assumptions about rethinking organizational practices and structures" (1991, p.42). She defines learning communities as

> ...a variety of curricular models that purposefully restructure the curriculum to link together courses or coursework during the same quarter or semester so that a group of students finds greater coherence in what they are studying and experience increased intellectual interaction with faculty members and other students. In learning communities, students and faculty members experience courses and disciplines as complementary and connected enterprises. (p. 42)

Many learning communities are interdisciplinary and involve team teaching. Students succeed in learning communities because this arrangement helps them see the connections among disciplines and encourages them to work with peers in a supportive and engaging environment. Faculty who teach in learning communities meet frequently to collaborate on making curricular connections and discuss the needs of the students they share.

Learning communities are increasingly being used as an alternative to traditional basic skills remediation. Tinto's research (1997) supports this trend, as does the success of LaGuardia Community College (NY) in its New Student House program, which offers developmental reading, writing and oral communication. Evergreen State College in Olympia, Washington, houses the National Learning Communities Project. Resource information is available at http://evergreen.edu/washcenter/

Integrated Reading and Writing Curriculums

Just as learning communities seek to lessen the fragmentation of the college curriculum, integrated reading and writing curriculums increasingly strive to reunite the "language arts". As McLaughlin, Price and Shultz (1992) point out, "for several decades, researchers and theorists in language and literacy have maintained that reading and writing should be taught as complex, interactive processes instead of as an accumulation of discrete skills" (p. 29). They agree with Tierney and Leys when they assert, "having to justify the integration of reading and writing is tantamount to having to validate the nature and role of literacy in society" (as cited in McLaughlin et al., 1992, p. 29).

Nevertheless, most colleges continue to offer separate courses in reading and composition. Of course, reading courses include writing, and composition courses include reading. However, the usual curricular structure does not allow most teaching faculty to take advantage of the inherent connections between the two at more than a cursory level. As Troyka notes, reading and writing

are "reciprocal meaning-making activities; one is diminished without the other" (as cited in McLaughlin et al., 1992, p. 29). For readings to be more than just springboards to writing, and for writing to be more than a brief summary or response to reading, the two activities need to be presented to students in ways that allow for depth and interaction at increasingly complex levels.

One model for such a structure is advanced by Bartholomae and Petrosky in their book *Facts, Artifacts and Counterfacts: Theory and Method for a Reading and Writing Course (1986).* In a course designed for underprepared students at the University of Pittsburg, the authors reject a "constituent skills" pedagogy in favor of an integrated approach that they believe helps students " re-imagine themselves as readers and writers" (p. 8) in an academic setting. Students are taught to view reading as an act of composition, and composition as the act of establishing authority to speak.

While Bartholomae and Petrosky's work sets forth a compelling rationale for the integration of reading and writing from a theoretical perspective, their course model may not easily transfer to a community college setting because it requires extensive training in their philosophy and methodology and also departmental commitment to strategies such as having student work comprise the main text for the course.

An alternative approach to consider is that taken by the Minnesota Community College System in a publication entitled "Community of Classrooms: A Handbook for Preparing Students for Reading and Writing in College." This is an assessment focused, outcomes-based model developed by thirty-five reading and writing faculty representing all twenty-one colleges in the Minnesota Community College System. In this publication, sample curriculum and assessment guides are offered for both separate and integrated developmental reading and writing courses. Faculty who participated in this project taught in colleges that maintained separate courses in reading and writing, but felt compelled to move toward more integrated approaches. They saw this change as a paradigm shift that presented many challenges, but also held out promising solutions. They describe the challenge as follows:

> We began to realize that, in order to define college readiness in reading and writing in a way that would be meaningful for us and for our students, we would need to rework many of the assumptions under which we had operated in the past. This change would be a structurally deep process in which we would thoroughly, systematically rethink our approach to learning and appropriate means for assessing that learning. . . . In previous paradigms of learning to read and write, learning was generally described or classified by discrete units. Learning under the new paradigm is, by contrast, holistic, organized around authentic rather than contrived learning tasks that demand active rather than passive responses from students. (p.1)

The "promising solutions" spring from the creation of communities–communities of teachers and communities of learners.

> Our work involved active learning, building consensus, and problem-solving around the questions we were asking: eventually, we understood that through this collaboration we had built a community. Similarly, as we discussed the effects of this new outcome-based model on our classrooms, we came to understand that students in our classrooms, also

> grounded in common learning goals and experiences, were becoming a community as well. (p.2)

Specifically with regard to the integration of reading and writing, their collaboration led them to what they describe as a "metamorphosis".

> We began to acknowledge that we were now thinking from the merged view of the interconnections of teaching the reading/writing process. We had transformed our perspectives and our beliefs to the integrated model. Our points of view have evolved, and our students will benefit from what we have learned: to appreciate the whole process. (p.113)

INSTRUCTIONAL INTERVENTIONS AND ACADEMIC SUPPORT SERVICES

Assessment and Placement

There is clearly a consensus in the field of developmental education that mandatory assessment and placement are key components of successful programs. (McCabe, 2000; Boylan, 2002; Roueche & Rouche, 1999). While a majority of community colleges require assessment for incoming students unless they meet specific criteria for exemption, mandatory placement is more likely to occur in four-year colleges and universities than in community colleges (Rouche & Rouche, 1999, p. 24). Boylan (2002) in *What Works* explores a number of reasons why mandatory placement has not been instituted in more community colleges. He concludes that the most valid argument against mandatory placement is that developmental courses are not effective. Agreeing with Norton Grubb that too many developmental courses are "dull, poorly taught, and emphasize low level drill and practice" (Boylan, 2002, p. 36), Boylan recommends that institutions evaluate their developmental courses before instituting mandatory placement. Only when developmental courses are found to have satisfactory instructional methods, techniques, and success rates should mandatory placement be considered.[2]

Tutoring

Tutoring is perhaps one of the most universal services offered in basic skills programs. Boylan is a strong advocate for the necessity of tutor training. He argues,

" The provision of tutoring by well-trained tutors, as opposed to untrained or marginally trained tutors, is what separates successful tutoring programs from mediocre tutoring programs" (2002, p. 50). The College Reading and Learning Association (CRLA) offers a certification program in tutor training at different levels with recommendations for specific areas of training. This certification program requires not only that tutors receive a certain number of hours of training on selected topics, but also that the tutor training program be systematically evaluated for its effectiveness.

Supplemental Instruction

Supplemental Instruction was developed by Deanna Martin in 1973 at the University of Missouri at Kansas City. Rather than targeting individual students, as tutoring does, supplemental instruction targets "high-risk" courses, courses that typically have high failure rates. Supplemental instruction is offered to all students enrolled in the course, not just those having difficulty. Supplemental instruction leaders, recruited from students who did well in the course

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[2] Determining these measures raises complex issues of program assessment, addressed on the next page.

and have been recommended by their instructors, are trained to run small group study sessions outside of class time that emphasize the underlying skills and abilities needed to be successful in the course. Supplemental instruction leaders attend all class sessions and serve as model students demonstrating the qualities of active learning, critical thinking, and effective study skills.

Research conducted by the University of Missouri at Kansas City consistently shows a statistically significant lower rate of failing grades and higher average course grades for those who participate in Supplemental instruction sessions. "Supplemental instruction is the only program validated by the U.S. Department of Education as improving student academic achievement and graduation rates" (Center for Supplemental Instruction, University of Missouri-Kansas City, 2000. p. 1).

Classroom Assessment Techniques

Classroom Assessment Techniques are cited by Boylan (2002) as "probably one of the most successful higher education innovations in the decade of the 1990's, ...and a technique used widely by best-practice institutions in the CQIN/APQC [2000] study" (p. 104). Introduced by Cross and Angelo in 1988, classroom assessment techniques bring formative evaluation into the classroom for the purpose of improving teaching and learning (Angelo & Cross, 1993). According to this technique, students anonymously respond to informal assessments designed by their instructors, turning in their responses at the end of a class meeting. Instructors get immediate feedback about what students have and have not learned during that class session, and share the feedback with their students at the beginning of the next class session. Together, they can address points students did not understand.

In this way Angelo and Cross emphasize active learning. They state, " To improve learning, it may often be more effective to help students change their study habits or develop their metacognitive skills... than to change the instructor's teaching behavior" (p. 4). They generally agree with constructivist approaches to learning that emphasize each individual's role in his/her own learning process. The techniques presented in their handbook, *Classroom Assessment Techniques*, provide instructors with practical tools to encourage meaningful learning and self-assessment.

Learning laboratories

Learning laboratories are another traditional support for basic skills programs. Unfortunately, many are not well coordinated with the courses they are intended to support, with lab personnel only marginally connected to instructors and curriculum. Boylan (2002) states, " The integration of classrooms and laboratories appears to be an essential component of successful developmental programs" (p. 64). He defines integrated programs as programs in which (a) lab coordinators and faculty collaborate in course design, articulating how lab activities will support classroom instruction and how these activities relate to course goals and objectives; (b) students are required to complete lab activities which are a part of their course grade; and (c) labs are located near the instructional areas they support.

Technology

Technology is increasingly playing a significant role in basic skills programs. According to a study by the American Association of Community Colleges (Shults 2000), 95% of community colleges reported using computers in at least one subject area (p.1). However, a CQIN/APQC (2000) benchmarking study advises caution. Boylan found that "instructors at best-practice

institutions used technology only to provide supplementary assistance, tutoring, or individual drill and practice outside of class. They did not rely on technology as a primary instructional delivery system" (Boylan, 2002, p. 81). Boylan recommends using technology in moderation to support and supplement course instruction.

Counseling and Academic Advising

Counseling and academic advising play an important role in successful developmental education programs. Martha Maxwell (1997) makes the case for proactive counseling that is well integrated with instructional and other student support services: "Successful programs must integrate counseling with teaching, and must have a highly structured, easily accessible, and preventative format. Counselors must work with faculty and staff to provide mentoring programs, informal student support groups, and credit courses in social, academic and career planning" (ERIC abstract). Boylan (2002) stresses the need for monitoring student performance through a collaboration of faculty and academic advisors. Early intervention is key for "at risk" students, and systems should be in place for early and on-going communication between faculty, staff, and academic advisors to provide assistance to students in a timely way.

FACULTY AND STAFF DEVELOPMENT

In April 2000, the Academic Senate reaffirmed the vital role of professional development in the California Community College System. Noting that lack of funding is a chronic problem, the Academic Senate nevertheless supports and reinforces the spirit of AB 1725, in which it is pointed out that faculty must have "authority over the substantive direction of the programs and courses in which they work, through the quality of their relationship with the college administration, and in the quality of their interactions with the communities of students they teach" (*Faculty Development: A Senate Issue*, 2000, p.2).

Research supports this point of view. In *What Works* (2002), Boylan cites several studies that highlight the impact of professional development and training on student success. He concludes, "No matter what component of developmental education was being studied, an emphasis on training and professional development improved its outcomes" (p.46). The evidence is clear. Successful developmental education programs make staff development a priority, and make sure that adjunct faculty participate in professional development activities. Boylan recommends ongoing, long-term programs over "one-shot" approaches and a combination of discipline-specific and overall instructional/learning strategy topics.

Nowhere is professional development more imperative than in the design and delivery of basic skills education. Norton Grubb, author of *Honored But Invisible: An Inside Look at Teaching in Community Colleges* (1999), is critical of the "skills and drills" approach that historically has dominated remedial coursework. He refers to this as a behaviorist approach, and agreeing with the philosophy espoused by Bartholomae and Petrosky, states that "implicitly instructors in this tradition assume that literacy and numeracy are individual skills, following a set of formulaic rules, rather than forms of social communication and practices where individuals must have a deeper understanding of the purposes of reading, writing and mathematics in different settings" (Grubb, p. 3). The latter he refers to as constructivist approaches that are student-centered and meaning-centered. In the absence of structured opportunities to engage in dialogue about good teaching practices and to construct coherent philosophies of teaching that emphasize meaning-

making, individual instructors are more likely to turn to conventional approaches with which they are most familiar. He states

> Thus the very absence of discussions about pedagogy within a college and the absence of any institutional mechanisms to prepare developmental instructors (especially part-timers) are indications that instruction has veered in the direction of skills and drills. Instead, community colleges that want to improve the quality of their developmental programs need to have explicit discussions about pedagogy, explicit agreements and mechanisms to move those agreements into practice. (p.4)

Faculty participation in strategies such as learning communities obviously requires a serious commitment to professional development. Rethinking curricular structures necessitates sustained dialogue on the purposes and processes of education. Faculty engaged in collaboration, be it team teaching or just ensuring that the curriculum of one class "links" to that of another class, are forced to consider new approaches and perspectives. The closed door of the individual classroom is opened up and teaching enters the realm of the communal. Grubb (2001) supports this open sharing, asserting that it takes us beyond "idiosyncratic good teaching," which cannot sustain institutional improvement in the quality of teaching. Barbara Leigh Smith expresses a similar theme in referring to learning communities as "associative structures" –structures that bring individuals together in a common cause. Smith quotes Joseph Katz as saying, "Continuous learning on the part of the faculty seems to be a prerequisite for the needed transformation of teaching." Building on this principle, Smith says, "Associative structures that support continuous learning on the part of groups of faculty seem to be a prerequisite for the needed transformation of our colleges" (Smith, 1991, p. 47).

Assuming that opportunities for faculty development exist, what kinds of skills and abilities are we looking for in developmental educators? Pat Smittle, of Santa Fe Community College in Gainsville, Florida, lists the following academic attributes of good developmental education teachers (Conference Presentation, National Conference on Research in Developmental Education, 2001):

- Demonstrates Content Knowledge
- Demonstrates the ability to deliver the content
- Varies instructional delivery methods
- Maintains organized and structured activities
- Possesses knowledge of learning styles and how to apply this to instruction
- Provides critical thinking activities
- Relates the curriculum to the real world and careers
- Actively engages students
- Maintains high academic standards
- Engages in classroom research
- Engages in professional development activities

Smittle recognizes that developmental educators must also address the affective domain. In addition to the above academic attributes, she lists the following non-academic attributes of good developmental educators:

- Chooses to teach underprepared students
- Demonstrates a passion for working with underprepared students
- Enjoys and respects students
- Sees the whole student
- Creates a "classroom community" learning environment
- Motivates students
- Engages in "intrusive" (proactive) student activities
- Encourages students to use all available support services
- Maintains an innovative spirit
- Knows how to and enjoys working with teams

What topics should be addressed in a good faculty development program for developmental educators? A National Association for Developmental Education (NADE) survey of professionals in the field about "Topics for Training and Professional Development" (Boylan, Shaw, Saxon, Materniak, Clark-Thayer & Rodriguez, 2001) lists the following topics in rank order as important for those teaching in the field who already possess a Masters degree:

1. Instructional strategies
2. Assessment
3. Curriculum Design
4. Teaching/Learning Styles
5. Adult Learning Theory
6. Content Specialty
7. Educational Psychology
8. Program Evaluation
9. Instructional Technology
10. Research Methods

Given the importance of faculty development, what is the impact of having so many adjunct faculty teaching developmental education courses? In *What Works* (2002), Boylan states that over 60% of community college courses nationwide are taught by adjunct faculty. This figure is consistent with a recent study by the American Association of Community Colleges (Shultz, 2000) in which respondents indicated that over 65% of these courses were taught by adjunct faculty. While the National Study of Developmental Education found no differences between educational outcomes for students taught by full or part-timers, they did find differences "when a program relied predominantly on adjunct faculty to teach developmental courses" (cited in Boylan, 2002, p. 55). These differences became significant when over 70% of developmental courses were taught by adjunct faculty, resulting in poor pass rates for those courses. According to Boylan, best practice institutions do not have more than 50% of developmental courses taught by adjunct faculty, and those adjunct faculty who do teach developmental courses are considered an invaluable resource, carefully selected and systematically trained. Boylan makes several suggestions for enhancing the success of adjunct faculty in developmental programs including formal mentoring, resource manuals, inclusion in department meetings, and staff development activities (p. 57).

It should be pointed out that Boylan did not study the impact of high rates of adjunct faculty on student performance in any given institution. As suggested above, supporting adjunct instructors with resources and increasing students' access to adjuncts by providing office hours might well minimize or even eliminate any significant difference between the quality of basic skills instruction provided by full-time and adjunct faculty.

PROGRAM EVALUATION

Several studies (e.g., Boylan, Bliss & Bonham, 1997; Rouche & Rouche, 1999) provide evidence that comprehensive and systematic program evaluation is a critical component of successful developmental education programs. Boylan asserts that most programs do collect evaluative data, but do so in a fragmented way with no particular purpose or audience in mind. He defines *systematic evaluation* as evaluation that is done at regular intervals, is part of an overall plan, includes both formative and summative activities, uses a variety of measures, and is shared with a variety of audiences (p. 40).

Formative evaluation efforts are those activities that are designed specifically with the goal of program improvement in mind. Boylan (2000) refers to these efforts as the "grassroots" of outcome assessment, with instructors on the "front-line". He states,

> If formative evaluation is to result in program improvement, it must be shared, reviewed, and analyzed by those people who can have the most impact on developmental education. This includes the administrators, faculty and staff who work with developmental education. These individuals should be the ones to plan program revisions based on evaluation results. (p. 45)

Summative evaluation is defined by Stake as "aimed at giving answers about the merits and shortcomings of a particular curriculum or a specific set of instructional materials" (as cited in Boylan, Bonham, White, & George, p. 371). Summative evaluation should not be implemented during initial stages of a new curriculum or program. Programs need adequate time to refine and revise (through formative evaluation) their methods and processes before evaluation is appropriate and valid. In fact, Boylan stresses that many innovative and promising programs are squelched in formative stages by pre-mature efforts at summative evaluation.

Boylan (2002, p.40) recommends that data be collected at three levels:

1. Primary Level: descriptive data such as the number of courses, number of students served, hours of tutoring – data that gives a picture of what is actually happening-services offered, numbers of students receiving services.
2. Secondary Level: data on short-term outcomes such as completion rates of developmental courses, grades in courses, performance in the next level course, and semester to semester persistence.
3. Tertiary Level: data on long-term outcomes such as grade point averages, long-term retention, and graduation rates.

In addition, he recommends surveying students' satisfaction with developmental courses and support services, and surveying faculty's satisfaction with students' skills as they progress through developmental sequences (p. 41).

Boylan emphasizes that evaluation plans be developed with maximum input by those who will use the results, and should be disseminated to key campus administrators with an executive summary to highlight conclusions and recommendations (p. 42).

It should be noted that the measures recommended by Boylan differ from the minute student learning outcomes currently being adopted by regional accrediting commissions. Boylan supports the use of institutional and behavior variables (e.g., course completion, persistence, and retention) as well as longer term outcomes, such as student success in a related transfer-level or occupational course.

Model Programs in California Community Colleges

The information that follows was developed by a team of faculty from the Basic Skills Committee of the Academic Senate for California Community Colleges and administrators from the Chancellor's Basic Skills Advisory Committee. Using responses from a 2001 survey on basic skills practices throughout the state, members of this team interviewed contact people at the colleges to develop descriptions of effective practices. Those included below were selected on the basis of their impact on students, the number of students affected, and the quality of evidence to support the results that were claimed.

We organized these model practices according to the above descriptions summarized from the analysis of literature on effective practices in basic skills. We accepted as valid all the evidence reported by our contacts at the colleges. A couple of the model practices below were selected as examples of effective practices based only on general reports of success from colleges because we could not identify similar practices that were supported by data.

What follows is a selection of programs and processes found in California community colleges that exemplify effective practices described in the section above, A Review of the Literature.

I. Program Structures

A. Coordinated Approaches

Coordinated approaches exist in many forms in California community colleges. One of the few centralized basic skills programs is found at **Contra Costa College.** This institution maintains an Academic Skills department with the same status as other academic departments. Headed by a coordinator with 60 % reassigned time, this department includes basic reading, writing, and math. It includes four full-time faculty who specialize in basic skills in these three disciplines. In addition, this department is part of the Resources for Student Services and Success division, which includes library services and counseling, an organizational scheme that facilitates a close working relationship among these instructional and support services.

Because this organizational model is new, there is no evidence yet that it is successful; however, the college's office of research will conduct a program review later this year (2003).

Los Medanos College employs a very effective decentralized but highly coordinated model, which has proven very effective. At Los Medanos, the Teaching and Learning Center Advisory Committee includes representatives from all disciplines and services that contribute to basic skills instruction: math, English, ESL, counseling, tutoring, and the Reading and Writing Center. Also represented are people representing general education, occupational education, college administration, and students. Chaired by the Teaching and Learning Center Director (a 50% reassigned time position), this group, working in concert with the Office of Instructional Research, provides comprehensive and systematic evaluations of all aspects of the developmental education program.

The demonstrated success of students enrolled in basic skills classes at Los Medanos indicated that this approach is working well.

B. Learning Communities

Another structural arrangement is the Learning Community, which is designed for delivery of instruction and in some cases student support services. The simplest learning communities include pairing of two classes from different disciplines that share a common theme. A cohort of students who enroll in one of these classes must also enroll in the other. More complex models include a block of several classes and may include counseling, organized out-of-class activities, regular study sessions, etc. Many of the state's community colleges have instituted learning communities. In fact learning communities is the most common innovation in community colleges in recent times.

Among the earliest and most successful attempts at establishing learning communities is **Grossmont College's Project Success**, which began in 1989 with one pair of linked basic skills classes, English Fundamentals and College Reading, and a small cohort of students. The college has expanded this program to include as many as fifteen pairs of classes, including such courses as humanities, speech, history, and philosophy for students beyond the basic skills levels.

Research to determine success of this project compared students in the Project Success paired-class cohort with those taught by the same instructors in classes of the same course that were not paired. From fall 1996 through spring 2000, rates of success, retention, and persistence for the Project Success students have remained significantly higher than for students in the control group. In addition, GPAs of Project Success students were higher than for those students not in the program. On the other hand, students who completed Project Success did not succeed at transfer-level English at rates significantly higher than students who did not participate in the program.

Another variation of the basic skills learning community is the "bridge" classes offered at **Cuyamaca College**. A cohort of entering students assessed as needing basic skills reading and writing enroll in an English class and a paired reading class. The English class includes an "extra" hour for student-teacher workshop activities.

Rates of retention, persistence, and success for students in bridge classes are significantly higher than for students in comparable non-bridge classes.

Mt. San Antonio College's Bridge Program combines two components: summer bridge and freshman experience. First-time freshmen from local high schools who are identified as at-risk enroll in math and English classes linked with study techniques or counseling classes to provide

them with strategies to succeed. These students also receive support from supplemental instruction aides, peer advisors, counselors, and educational advisors.

Students in the Bridge component enroll in linked or clustered classes taught by instructors who cooperate in planning lessons. They also take a one-unit community class in which they learn about the support network of college services, including faculty and staff, and they attend field trips to four-year universities as well as museum and arts events. Bridge Program staff and counselors, financial aid advisors, and transfer and advising specialists also participate to support students. Bridge students can choose to participate in the Summer Academy and or Freshman Experience.

Data reveal that basic skills course completion rates for Bridge program students are significantly higher than total college population rates, as are rates of persistence through math and English courses (http://rpgroup.org/cssweb/default.htm).

Cerritos College has been implementing learning communities since 1995, when they were awarded a Title III grant specifically for the purpose of establishing learning communities (1995 –2000). The college established two tracks – basic skills and transfer. Over 15 learning communities are offered each semester. In the basic skills track, developmental courses are paired with counseling and guidance courses. Included in Cerritos College's 2002 –2003 Program Objectives are plans to "expand and strengthen [their] basic skills offerings so that they are linked with other appropriate basic skills" and "coordinate with outcomes-based model for WASC accreditation." This is truly an institution-wide effort with the Learning Communities Program Advisory Committee and the Coordinator reporting to the Vice President of Academic Affairs. This program has a clearly defined mission statement and annual objectives. The college has a retention counselor for all learning community students. It has also put into place a strong faculty development program for training faculty to participate in learning communities. See http://www.cerritos.edu/lcp for more details.

Cerritos provided data that shows remarkable retention and student success rates.

Santa Ana College's Freshman Experience uses counselors who take part in math and English paired classes to keep track of students' progress and provide help when necessary. This program targets a cohort of approximately 300-500 incoming freshmen each year. Since 1996 the college has researched five cohorts over five years and found strong evidence of increased persistence, retention, and higher pass rates than before this program was initiated.

College of the Sequoias uses a learning communities approach in a unique way by linking an ethnic studies class with a half-semester basic skills English class followed by a half-semester transfer-level English composition class. Mexican American, African American, Asian American, and Native American learning communities have been conducted. The college reports that 83% of students succeed in their basic skills English course, and 70% succeed in the transfer-level course. Furthermore, student questionnaires reveal that the students in these learning communities enjoy this experience.

Fresno City College adds a guidance/counseling class to its math, English, and ESL paired classes to create three-class learning communities. A typical clustering is basic skills reading, basic skills writing, and counseling. Instruction is supplemented by trips to museums, historical landmarks, and events relevant to the subject matter of the class work.

The college has evidence that their learning communities increase retention, although there is no corresponding increase in rates of student success.

Solano Community College, building on the success of its learning communities that include English, math, and counseling classes, plans to institute two new learning communities, one consisting of 8.5 units and the other 10.5. "Cultures and Computers," for lower-level students, will include a basic skills reading and writing class (two levels below transfer-level English composition), a study skills class, a one-unit guidance/counseling class, and a one-half unit fast-track introduction-to-computers class. The reading and writing class requires an hour of reading lab and an hour of writing lab work.

A higher-level learning community, entitled "Facts, Fictions, and Formulas," will include an English course (one level below transfer-level English composition), an elementary algebra course, a counseling course entitled "Math Without Fear," another counseling course on study skills, and enrollment in the reading lab and writing lab.

Solano College has at this time only positive reports from students to support claims of success.

We need to point out that successful learning community programs require at a minimum an hour per week for instructors to plan and coordinate their efforts. More ambitious programs include team-teaching, tutoring, supplemental instruction, and opportunities for enrichment activities. All of these features require financial support. Many colleges with these programs report that they have succeeded in getting grant funds.

C. Integrated Reading and Writing Programs

Integrated reading and writing programs have been introduced in colleges as an effective means to help students more efficiently learn skills that are complementary to each other. **Cuyamaca College** offers as part of its bridge program basic skills English composition and companion reading classes. Students who enroll in either one of the reading or English composition classes must also enroll in the companion class. Rates of retention, persistence, and success for students in this bridge program are significantly higher than comparable rates for students who took traditional unpaired classes.

Both **Los Medanos** and **Diablo Valley College** have instituted integrated five-unit basic skills reading and writing courses. At Los Medanos these classes are taught by English faculty who have qualifications in either reading or writing. Staff development has helped prepare participating English faculty on the reading component. The classes meet 6 hours a week, one of those hours being an integrated lab hour, when tutors come into the classroom and lead small group work, usually focused on grammar, editing, or proofreading exercises. These classes have been designed for students who are one and two levels below transfer-level English.

Los Medanos has data that show a dramatic 16 percent increase in success rates for students two levels below transfer-level English who take these integrated courses over those who took individual English and reading courses. For students one level below transfer-level English, there was a six percent increase in success rates for students in the integrated classes.

II. Instructional Interventions and Academic Support Services

A. Assessment and Placement

In order to comply with matriculation regulations, all public California community colleges must attempt to assess incoming freshmen and provide advisement that helps the student begin an educational plan by enrolling in courses that the student has a reasonable chance of successfully completing. Students whose assessment results indicate a need for basic skills, then, should be encouraged to enroll in courses appropriate for their skills levels in reading, writing, and mathematics.

But assessment and subsequent appropriate placement for basic skills students does not seem to be working this way at many colleges. According to results of the 2002 Basic Skills Survey conducted by the Academic Senate for California Community Colleges, most of the sixty-one reporting colleges indicated that over half their incoming students who were assessed were assessed as needing instruction in basic skills reading, writing, or math; yet according to these colleges a surprisingly small percentage of these students actually enroll in the basic skills courses that they need. And according to Chancellor's Office data, "*In any given year, approximately 1 in 5 CCC students enroll in at least one BS* [basic skills] *course*" (California Community Colleges, 2002). The same report also shows that in a cohort of students who began in 1995 and were tracked for the next six years, students who completed at least one basic skills course and who had a stated educational goal earned an AA/AS degree or a certificate at a higher percentage (17.4%) than students who had a stated educational goal but did not take a basic skills course (13.1%). Considering that many of those students in the group that did not take basic skills courses were prepared for college level work (though we do not know the percentages), the difference of 4.3% is notable. In other words, students who took basic skills courses and had a stated educational goal are more likely to succeed than similar students who did not take basic skills courses even though many of those students were already prepared for college-level work. So we can conclude that basic skills instruction appears to help our students reach their goals, and therefore accurate assessment and placement is very important to ultimate educational success.

No college that took part in our study included assessment and placement processes when asked to indicate which of their practices were effective.

B. Tutoring

Tutoring, on the other hand, ranked as the most frequently indicated effective practice. Tutoring programs can be found in all colleges; however, the effectiveness of tutoring varies considerably. The most successful tutoring programs are well designed to complement regular instruction and include effective training for tutors. We found a number of excellent tutoring programs in the California community colleges.

San Jose City College reports great success for its Partnership for Excellence funded Writing Tutors Program, which uses mostly lower division peer tutors but also some upper division or graduate level tutors from nearby four-year institutions. The success of this program is attributed to a well-designed tutor-training program. Prospective tutors, who must have received at least a "B" in the course for which they will be tutoring and have the recommendation of their instructor, are further screened for their ability to write well from samples they submit. In addition, they must pass an interview. Those who are selected must then take a one-unit tutor training course focusing on techniques for tutoring writing. After an initial semester, continuing tutors must attend the tutor training class sessions, with the option of completing work for a unit of credit or receiving pay for this class time. After they complete three or four tutor-training class sessions, new tutors are given one or two students to tutor until their self-assessment and their instructor indicate that they can successfully increase their loads.

San Jose City College's office of research compared rates for persistence and success in writing courses for students who received tutoring with students taking the same courses who did not receive tutoring. In its study the office of research compared completion rates, grade in course, and success in the next course in the sequence the following semester. Data show that students who received tutoring at the college were significantly more successful than those who did not. In addition, surveys completed by students who received tutoring and surveys completed by instructors whose students received tutoring reflect the effectiveness of this program.

North Orange County Community College District's non-credit program offers a literacy program designed to improve reading and writing skills. After students in this program are assessed, tutors provide them with individualized instruction in reading, writing, spelling, vocabulary, and basic math skills. Tutors use a combination of instructional approaches, including computer programs, videos, audio tapes, small group workshops, and one-to-one tutoring. While reports indicate the success of this approach, there is no objective supporting data.

Several other colleges, including **Alan Hancock**, **American River**, **Contra Costa**, **DeAnza** and **San Joaquin Delta Colleges,** report great success using the California Reading and Learning Association (CRLA) tutor-training program, which includes a curriculum and tutor assessment instruments. Alan Hancock offers this course as an eight-week, one-unit credit course.

Most colleges that reported successful tutoring programs housed tutoring services in centers or labs. **Monterey Peninsula College** provides one of the largest such program, serving about 1500 students in its English Study Skills Center for students who have been assessed two or three levels below transfer level English. This center includes one online reading lab, and activities include summary and response exercises. The lab is staffed by instructors and peer tutors. Two hours a week of this lab is required for a four-hour-per-week writing class. A mathematics lab is available to students in basic mathematics classes.

Monterey Peninsula College reports 75% retention for students in this program.
Because these labs serve such a large number of students, their cost is relatively low.

Chaffey College provides an extensive tutoring program in its discipline-specific College Success Centers: Math, Reading/ESL, and Writing Centers. These three centers target students in basic skills classes, although students in more advanced courses are also welcomed. In addition

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Chaffey has opened four additional Multidisciplinary College Success Centers that serve all Chaffey College students.

Chaffey's College Success Centers have two functions: 1) to provide instructional support services to all students in a specific class, and 2) to provide student support services to individual students, sometimes initiated by an instructor. Each discipline-specific center provides tutoring from both well-trained peer and graduate-level tutors and instructors, and assignments and testing for instructors to create an extension of the classroom. Because curriculum for basic skills courses at Chaffey College was re-designed to produce a vertical sequence of skills, instructors and tutors in the centers can easily identify students' needs for their courses and provide instruction coordinated with that course.

Although evidence for the success of this approach to instructional and student support cannot be separated from the other changes that Chaffey College has instituted at the same time, student success has risen dramatically since the Student Success Centers have been instituted.

C. Supplemental Instruction

Though few colleges have the U.S. Department of Education-validated Supplemental Instruction program adapted for pre-collegiate classes, many colleges successfully employ the same underlying concept of using tutoring attached to specific basic skills classes. At **Rio Hondo**, students who enroll in basic skills reading, writing, and ESL are required to enroll in a supplementary workshop or lab. Students in pre-collegiate English composition classes enroll in a writing lab for which they spend at least two hours a week. The lab is equipped with computers and staffed by English instructors who work one-to-one with students to help them complete assignments.

Students in pre-collegiate reading classes must attend the reading skills lab at least three hours per week. The lab is equipped with computers and staffed by reading instructors and instructional assistants who work one-to-one with students. Instructors provide work packets for each student designed to strengthen weaknesses.

ESL students at Rio Hondo enrolled in composition classes must spend one hour a week in the ESL computer lab working on compositions for class. ESL students in the more basic grammar class work on programs that strengthen their skills in grammar and usage (e.g., "Focus on Grammar"). The lab is staffed with ESL instructors and an instructional assistant.

The college has clear evidence that students who enroll in recommended basic skills courses succeed at a much higher rate than students who attempt college-level courses. The degree to which the lab component contributes to this higher rate of success, however, has not been determined. (Only **Cuesta College** has data positively correlating the number of hours tutored to the success rate in a class.)

Using instructors for tutoring activities results in relatively high costs for this program, but Rio Hondo as well as other colleges find this approach worth the investment.

Like Rio Hondo, **Riverside College** uses instructors and graduate-level students in its reading and writing centers. Since instituting required lab hours for English composition and reading

classes, Riverside College has noted consistently higher success rates than before requiring visits to its reading and writing centers.

Other colleges use required labs for basic skills classes but presented no clear evidence that they are effective.

We found a somewhat different approach at **DeAnza College**. Here half-unit small group instructional support classes are paired with five-unit classes in writing, reading, and ESL as part of the College Readiness Program, which serves approximately 7,000 students a year. Skills instructors teach these small study-skills classes using group collaborative instruction and individualized lab modules. Skills covered include time management, textbook reading, note taking, and test taking strategies.

D. Technology

Although technology is not central to most effective basic skills programs, it is an important tool in many math, writing, reading, and ESL labs and centers, which use computers with one-to-one tutoring or for some drill and practice.

Cabrillo College reported using computers to supplement basic skills English instruction. Cabrillo's ENGL 290 includes use of a web site that provides students with information about study skills and adapting to college culture. The two hundred students who enroll in this class also access library assignments on this web site. One instructor and between five and eleven laboratory instructional assistants (most with bachelor's degrees) provide individual instruction and assistance to groups of no more than four students in once-a-week tutoring hour.

Cabrillo has clear evidence of success for this class. Before this class was offered, the retention rate for classes at the basic skills level in English was less than forty-nine percent. The retention rate for students who take the ENGL 290 class has been eighty-three percent. In addition, students who successfully complete ENGL 290 enroll and succeed in the next higher English class in much higher numbers than students who took other basic skills English classes. An added advantage is that the use of instructional assistants has made this approach inexpensive.

An approach that relies more heavily on the use of computers was reported by **Butte College.** Butte integrates online experiences at all levels of basic skills reading and writing. Included are uses of the Internet and email applications, instruction in Microsoft Word, and classes offered through Web CT.

Although Butte did not report having data that supports the effectiveness of this approach, a contact reported that students have responded well.

Solano College's *Cultures and Computers* learning community, described above, is yet another application of technology to basic skills instruction.

E. Student Support Services

Most of the students who come to our campuses in need of basic skills classes bring with them non-academic problems that we have not traditionally addressed in post-secondary institutions.

The vast majority does not have informed educational goals, and many are in need of resources – things like transportation, childcare, health care -- that more traditional students take for granted. Therefore an important component for increased success for under-prepared students has proven to be **counseling and academic advising.** As stated above, Fresno City College is one example of how counseling and advising may be components of a learning community.

Another approach is **Crafton Hills College's Student Success Program.** Crafton Hills College has hired three full-time student success advisors, each of whom is a former student leader at that college, has earned an associate's degree, and is continuing his or her formal education at a near-by university. Each of these paraprofessionals is provided with a list of all first-semester students who have enrolled in basic skills classes. They phone all students on their lists to remind them when their classes begin and to find out whether they need help with any problems such as finding childcare, getting to and from campus, finding help for a medical problem, or overcoming learning deficiencies. The student success advisors also help in the college's student-orientation classes.

Since Crafton Hills College has instituted its student-success program, retention in basic skills classes has increased significantly. Also student success has increased. Although there is no direct evidence substantiating it, those involved in the program believe that increased retention has caused higher rates of success.

The cost for this program includes little more than the salaries paid to the paraprofessional student success advisors and their small office space, which is funded with Partnership for Excellence dollars.

Los Medanos College introduces counseling and advising support in a different way. Counselors make two presentations in basic skills English classes (two levels below transfer-level) and math classes (pre-algebra), one presentation near the beginning of the semester and another near the end. In addition, students complete mid-semester self-evaluations that are used by faculty to make individual referrals to the counseling department as well as to provide counseling with general information about students' needs for support services. All students in either of these two courses are required to see a counselor outside of the class for at least one individual counseling session for educational planning.

A comparison between the students in the English course who had this counseling and those who took the same course a year before, when there was no counseling, demonstrates the effectiveness of this approach. Of the students who had no counseling intervention, 44% of those who succeeded in the course went on to the next higher English course. When counseling intervention was introduced, 64% of those who succeeded went on to the next higher English course.

For colleges with adequately staffed counseling departments this practice is not costly.

III. Faculty and Staff Development

More than half of all colleges responding to the Academic Senate's Basic Skills Survey (2001) reported that they provide significant staff development for basic skills instructors. However no college reported a faculty and staff development program as an effective practice, although at least one hour a week of planning and coordination time for faculty involved in learning communities was common (see pp.17-21 of this document). Because the survey question on effective practices did not invite responses about staff development, those responding focused on classroom interventions and out-of-class support services and not practices that were less directly related to these.

Clearly the 2002-2003 mid-year elimination of staff development funds and the general loss of community college state funding might drastically reduce opportunities for these important activities.

The Academic Senate recently adopted the following resolutions supporting funding for faculty and staff development as a critical element:

5.04 F 02 Restoration of State Professional Development Funds
Resolved, That the Academic Senate for California Community Colleges reaffirm resolution 5.03 S02 that calls for us to "communicate in all appropriate venues" the seriousness of the funding cuts to faculty professional development and work to have this funding restored;

Resolved, That the Academic Senate for California Community Colleges emphasize the fact that professional development is essential to maintaining a strong community college faculty who can provide the learning opportunities that community college students deserve, and therefore insist on the restoration of professional development funding support from the state;

Resolved, That the Academic Senate for California Community Colleges strongly urge the Chancellor's Office to take the lead in educating the Board of Governors, Legislators, and the Governor about the critical loss of and immediate need to restore staff development funds in the 2003-04 budget; and

Resolved, That the Academic Senate for California Community Colleges support local senates in asserting that faculty professional development is an academic and professional matter and that decisions and allocations regarding faculty development are to be established in accordance with agreed upon policies and procedures, regardless of the source of funding.

12.01 F 02 Faculty Development Funds
Resolved, That the Academic Senate for California Community Colleges actively support the achievement of student success through the restoration of state funding for faculty and staff development;

Resolved, That the Academic Senate for California Community Colleges work with other groups to educate the Chancellor's Office, the Board of Governors, and the Legislature concerning the connection between faculty and staff training and the critical issues of student access and retention, quality instruction, recruitment and retention of quality faculty and staff, issues of health and safety, and the integration of instructional technology; and

Resolved, That the Academic Senate for California Community Colleges urge the Chancellor's Office not to eliminate the monitoring and reporting of faculty and staff development activities

IV. Program Evaluation

There are a number of references to evidence of effectiveness for the practices discussed previously. We included in this paper practices for which there was evidence of success. However, we found that many colleges have just begun developing the capacity to substantiate the effectiveness of their instructional and student support programs and practices. We can expect better quality data as colleges across the state work to improve data collection and analysis and as recently initiated research projects are completed.

In addition, the Chancellor's Office continues to provide data from individual colleges and the system as a whole that can be useful for analyzing the effectiveness of basic skills efforts.

The most complete effort of data collection and analysis was found at **Chaffey College**. Before implementing its "Basic Skills Transformation" program, researchers at Chaffey College developed a research methodology that includes data collection and tracking mechanisms, operational definitions, identification of experimental and control groups and baseline periods, and tangible measurable outcomes. From this assessment data, faculty, staff, and administrators could evaluate the effectiveness of parts of the program. While providing a complete description of Chaffey College's research model is beyond the scope of this paper, we can point out some significant measures of effectiveness.

To determine the effectiveness of their newly instituted success centers, Chaffey researchers tracked all of the approximately 8,500 students (unduplicated) who accessed one of the success centers each semester and/or enrolled in a basic skills course. They found that 45% of Chaffey College students access a Success Center and/or enroll in a basic skills course. Students who participated in the program by enrolling in a basic skills class and using a Success Center were 23% more likely to complete a higher-level course successfully than students who did not participate in the program.

When they compared basic skills students who accessed a Student Success Center with basic skills students who did not, Chaffey researchers found that first-time college students and Hispanic students were more likely to complete their basic skills course than others in those groups who did not access a Student Success Center.

Chaffey researchers also compared rates of success in transfer-level courses for those students who accessed Success Centers to those who did not. First-time college students, Hispanic students, African-American students, female students, and students with limited English

proficiency who accessed a Student Success Center were more likely to successfully complete a transfer-level course than students from those groups who did not.

We need to also point out that data from well-designed research projects should be used to inform decisions about resource allocation and all policies effecting student success. **Copper Mountain College** has initiated a "Student Success Hour" as a means for bringing faculty and administrators together to review data, discuss program effectiveness, and plan for improvement. The Copper Mountain College Academic Senate and administrators meet together for one hour twice monthly to discuss student success. The Academic Senate President and the college's Chief Instructional Officer co-chair the meeting and collaborate on agendas and minutes. Designed to run like a graduate seminar, the meeting utilizes a faculty research team that examines local and general data with regards to course delivery, retention, grade distribution, and other factors that impact the mission.

Because Copper Mountain's mission commits the college to the success of "every individual student," the college administration, faculty and staff must consider all students when it contemplates new programs, class caps, abbreviated courses, new online classes, or any action that could affect the success of individual students. To align institutional planning and services with student needs, Copper Mountain has created a mission/vision matrix that informs decision-making and guides planning. Taken together, the mission/vision matrix and the Student Success Hour is contributing to the college's design of a new basic skills program.

Such institutional sharing of information and planning is one low-cost means of cultivating the development and enhancement of basic skills practices that best serve our under-prepared students.

Recommendations

The State of Basic Skills Instruction in California Community Colleges (Academic Senate, Spring 2000) contained the following recommendations for improving basic skills instruction at our institutions:

1. Local senates should lead their faculty and administration to view basic skills instruction as central to the community college mission.
2. Local senates should study the basic skills programs in their colleges and support basic skills instructors and program leaders by:
    a. recognizing basic skills students' particular needs for programs that include a personalized approach and supporting smaller classes sizes;
    b. urging administration to provide adequate ongoing funding for basic skills programs;
    c. working with counseling faculty and matriculation officers to ensure that all assessment of incoming students includes consideration of valid multiple measures and effective counseling and advising;
    d. reviewing course content to assure that it is aligned with results of placement information;
    e. supporting the hiring of faculty who are not only discipline experts but who are also committed to basic skills learners;
    f. acknowledging the importance of quality reading instruction to all areas of

curriculum and supporting the allocation of optimum conditions for reading instruction, including adequate classroom space and equipment to provide an environment conductive to learning;

g. advocating for specific research geared toward identifying methods to help basic skills students to receive appropriate placement, and to increase their retention and success rates; and
h. providing faculty development opportunities to inform all faculty about needs and methods of instruction best suited to basic skills students.

3. Local senates should lead the college to take a more global approach to the instruction of basic skills students so that faculty from all areas participate in an "across-the-curriculum" approach to basic skills learners. Successful approaches involve student services faculty as well as faculty from all disciplines, teaching both general and well as vocational education. As with successful transfer efforts, serving basic skills students needs to be an institutional commitment.

The above list of recommendations is not exhaustive, but with the rest of the information in this paper, it provides direction to local academic senates working to address this critical part of our mission.

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RESOURCES

There are a number of resources that are valuable to those seeking to develop successful basic skills programs and strategies or enhance existing ones. Below is a list of organizations, periodical publications, and conferences that we judge to be sources of useful information.

Academic Senate for California Community Colleges. http://www.academicsenate.cc.ca.us

Appalachian State University, North Carolina
Kellogg Institute for Training and Certification of Developmental Educators
http://www.ced.appstate.edu/centers/ncde

California Learning Community College Network
In consortium with The Hutchins Center at Sonoma State University, Moorpark College, Santa Rosa College and Diablo Valley College
http://clccn.org/basics/definition.html

College Reading and Learning Association (CRLA)
http://www.crla.net

National Association for Developmental Education (NADE)
http://www.nade.net

National Center for Developmental Education
Reich College of Education
Appalachian State University, North Carolina
Kellogg Institute for Training and Certification of Developmental Educators
http://www.ced.appstate.edu/centers/ncde

National Learning Communities Project
Coordinated by the Washington Center for Improving the Quality of Undergraduate Education
Evergreen State College, Washington State
http://learningcommons.evergreen.edu

RP Group: Student Success Project. http://rpgroup.org/cssweb/default.htm

Southwest Chapter of NADE (including California): SWADE
http://www.swade.info

Supplemental Instruction
University of Missouri, Kansas City
http://www.umkc.edu/cad/si

University of California, Berkeley
Community College Cooperative
http://ishi.lib.berkeley.edu/cshe/events/ccuc_forum/

Appendix B

Academic Senate for California Community Colleges Basic Skills Survey

The individual responses to survey questions #20 & 21 are available from the Academic Senate for California Community Colleges.

Survey on Basic Skills Practices

ASSESSMENT AND PLACEMENT

1. Approximately what percentage of your entering students sere assessed into:

Percentage Range	English 1A	One Level Below	Two Level Below	Three + Levels Below
0 - 19 %	21	11	16	22
20 - 39 %	23	24	25	7
40 - 59 %	6	14	8	2
60 - 79 %	2	3	0	0
80 - 99 %	0	0	0	0

What percentage of students assessed as needing basic skills courses enrolled in English courses:

Percentage Range	English 1A	One Level Below	Two Level Below	Three + Levels Below
0 - 19 %	11	12	10	4
20 - 39 %	3	4	5	4
40 - 59 %	3	5	6	4
60 - 79 %	3	4	5	3
80 - 99 %	3	5	4	3

2. Approximately what percentage of your entering students were assessed into:

Percentage Range	College Algebra	Intermediate Algebra	Elementary Algebra	Pre-Algebra	Arithmetic
0 - 19 %	35	27	10	14	11
20 - 39 %	7	15	27	17	12
40 - 59 %	0	0	4	2	7
60 - 79 %	0	0	2	0	2
80 - 99 %	0	0	0	0	1

What percentage of students assessed as needing basic skills courses enrolled in mathematics courses:

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Percentage Range	College Algebra	Intermediate Algebra	Elementary Algebra	Pre-Algebra	Arithmetic
0 - 19 %	12	14	11	5	8
20 - 39 %	2	3	6	7	6
40 - 59 %	1	1	4	5	2
60 - 79 %	1	2	2	1	1
80 - 99 %	1	5	3	3	3

3. The majority of Basic Skills students at your college enroll in Basic Skills courses by use of:

Selection	Total
a. An assessment test only	6
b. Multiple measures including an assessment test	52
c. Multiple measures excluding an assessment test	1

4. What kind of assessment instrument(s) do you use for mathematics placement?

Selection	Total
a. Paper	40
b. Computerized	20
c. Other	8

Name of test

Accuplacer Online
Advanced Math Readiness Test
Asset & Compass
Basic Math Readiness
Calculus Readiness Test
College Level Math
CPT Accuplacer Arithmetic
CSU-UC Math Diagnostic Test
Descriptive Tests of Mathematics Skills
DTMS and Accuplacer
Elem. Algebra
Intermediate Algebra Readiness Test
Mathematics Diagnostic Testing Project
Mt San Antonio College Math
Placement Test
Pre-calculus

5. What kind of primary assessment instrument do you use for English composition placement?

Selection	Total
a. Multiple-choice (paper)	27
b. Multiple choice (computerized)	22
c. Writing sample	9
d. Combination writing sample and objective	5
e. Other	1 self-reported English grade

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Name of test

Accuplacer - Reading comp and Sentence skills (2R+S)
Accuplacer online
ACT Compass
APS English and Essay
APS plus a writing sample
Assessment of written English
ASSET
COMPASS (computerized)
CPT Accuplacer sentence skills;
CPT-APMS (College Board);
DTLS
DVC reading and writing assessment
English placement
Hartnell developed and managed essay
Paper: APS for Community Colleges

6. What kind of assessment instrument do you use for reading placement?

Selection	Total
a. Multiple-choice reading test (paper)	33
b. Multiple-choice reading test (computerized)	25
c. Written response to reading	2
d. Other	0

Name of test

Accuplacer online
Accuplacer-reading comp and sentence skills (2R+S)
ACT Compass
APS
APS reading
ASSET
College Board Assessment and Placement Services Test
COMPASS
CPT Accuplacer reading comprehension
CPT-APMS
CPTS (Accuplacer)
CTEP Reading
Degrees pf Reading power
DTLS reading
DTLS writing/no reading test
DVC reading and writing assessment
EPT
Nelson Denny
Paper: Standard Diagnostic Reading Test, Form A, Blue Level
TABE

7. Have the scores for your primary placement tests been validated:

Selection	Total		
For mathematics?	Yes: 41	No: 3	In process: 8
For writing?	Yes: 43	No: 2	In process: 8
For reading?	Yes: 40	No: 2	In process: 10

8. When did your college last conduct a disproportionate impact study on Basic Skills students?

Year	Frequency
1992	1
1994	3
1998	2
1999	5
2000	11
2001	8
2002	1
In progress	2
Never	3

9. Check the boxes below that correspond to the areas for which your college has data.

	Success Rates	Retention Rates	Persistence Rates
English	46	42	36
Mathematics	46	42	34
Reading	43	40	32

10. What are the maximum allowable enrollments per section in your Basic Skills Classes?

Range	Writing	Reading	Integrated Reading/Writing	Mathematics
0 - 15	1	0	1	0
16 - 25	10	11	7	6
26 - 35	33	29	17	17
36 - 45	1	2	1	16
46 - 55	0	0	0	2

PREREQUISITES

11. Does your college have prerequisites for English composition courses above the Basic Skills level?

a. Yes: 51 b. No: 5

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12. Does your college have prerequisites for mathematics courses above elementary algebra?

a. Yes: 54 b. No: 1

13. At your college, what is the level of the English course required for an associate's degree?

Selection	Total
a. English 1A	25
b. One level below 1A	32
c. Two levels below 1A	0

14. At your college, what is the level of the mathematics course required for an associate's degree?

Selection	Total
a. Intermediate algebra	10
b. Elementary algebra	38
c. Below elementary algebra	1

d. Other: Passing math competency test; H.S. higher math with "C" or better; CLEP math with score of 500 or higher; College algebra for AA degree.

STUDENT SUPPORT SERVICES

15. Does your college provide a means to follow up on why students drop out of Basic Skills classes?

a. Yes: 15 b. No: 38

16. Has your college developed an intervention strategy to enhance student success?

a. Yes: 44 b. No: 4 c. We have plans for a strategy: 8

17. If the answer to Question #16 is yes, check each of the strategies below that are used at your college:

In-class tutoring: 24 Study groups: 22 Mentoring: 16
Student success counseling: 38 Supplemental instruction: 27

Other: 28

Academic warning notices
DSPS Services
Early Alert program - includes counseling
Early Assistance Workshops/group and individual tutoring
Early Awareness Monitors
Experimental curriculum
Faculty advising
Faculty contact and referral to services
Freshman experience program

Labs/English/study skills center
Learning assistance center tutoring
Learning communities/ Puente/ freshman experience
Learning skills courses and labs
MESA
Out-of-class tutoring
Peer tutoring/study skills lab/computer aided skill building
Puente
Reading and writing center
Retention Assistance Program
Student Success Program (case mgmt. approach)
Study techniques courses and workshops/ learning communities
Tutoring center and early alert program
Tutoring center/writing center/bridging lab/EOPS student support tutoring
Workshops/ tutoring open entry basic skills courses
Writing center/math lab/tutoring center

INSTRUCTION

18. What percentage of Basic Skills sections was taught by part-time faculty in fall 2000?

	< 25%	26 - 50%	51 - 75%	> 75%
Reading	17	13	11	3
Writing	10	22	10	5
Integrated reading/writing	12	3	7	2
Mathematics	13	10	19	2

19. Does your college provide significant faculty development or have established means by which your faculty can share expertise in Basic skills instruction

Selection	**Total**	
For mathematics:	Yes: 28	No: 20
For English:	Yes: 31	No: 22
For reading	Yes: 26	No: 23

20. If you answered "yes" to any of the above, briefly describe the type of activity or activities:

21. Briefly describe practices in Basic Skills at your college that are particularly effective

Appendix C

Most of the information in this paper was collected through telephone interviews and email interviews. In addition, some information was taken from descriptions of programs submitted to the Academic Senate for its Exemplary Programs awards. We also found some information on the RP Group's Student Success web site: **http://rpgroup.org/cssweb/default.htm**. The transcripts and notes from these sources are available from the Academic Senate for California Community Colleges.

U.S. Department of Education
Office of Educational Research and Improvement (OERI)
National Library of Education (NLE)
Educational Resources Information Center (ERIC)

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